

## SPECIFICATION

Atty Dkt: F-9057

Identifier: Erwin JUNKER

### Patent claims

1. Grinding tool (1) that comprises at least two detachable parts (5, 7) that are connected to one another, which embody a grinding-wheel type body that has a layer of CBN or diamond grinding means and that has on its circumferential area a grinding surface (6) that is embodied interrupted, whereby said parts  
5 (5, 7) can be positioned relative to one another using a positioning mechanism and can be fixed in the position by means of a centering device arranged such that said grinding wheel-type body is adjustable in terms of its grinding width and is largely not spread after fixing.

10 2. Grinding tool (1) in accordance with claim 1 in which said positioning mechanism for adjusting and fixing said two parts (5, 7) relative to one another has at least three adjusting/positioning units (11, 23) that are arranged spaced circumferentially at largely the same angle, whereby said centering device is embodied in particular as a centering collar.

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3. Grinding tool (1) in accordance with claim 2 in which said centering collar has a centering collar (8) disposed radially outward and/or a centering collar (14) disposed radially inward.
4. Grinding tool (1) in accordance with claim 2 or 3 in which said  
5 adjusting/positioning units (11, 23) are arranged in the radial direction as far as possible outside in the direction of the exterior circumference of said grinding tool (1), whereby said centering collar is arranged radially outside of said adjusting/positioning units (11, 23).

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5. Grinding tool (1) in accordance with any of claims 1 through 3 in which one (5) of said two parts (5, 7) embodying said grinding tool is arranged securely on a grinding spindle (2) and said other part (7) of said parts (5, 7) on which said adjusting/displacing units are arranged, is positionably and/or  
5 displaceably affixed relative to said secure part (5).

6. Grinding tool (1) in accordance with any of claims 1 through 5 in which said part (7) is secured in a nonpositive fit and play-free manner to said part (5) by means of threaded tensioning pins and a tightened tensioning bolt (12).

7. Grinding tool (1) in accordance with claim 5 or 6 in which centering on a  
10 spindle nose on a grinding spindle (2) is additionally provided.

8. Grinding tool (1) in accordance with any of claims 1 through 7 in which the grinding width is continuously adjustable by means of said positioning mechanism.

9. Grinding tool (1) in accordance with any of claims 1 through 8 in which said  
15 parts (5, 7) have shape-congruent teeth on their axial sides that face one another.

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10. Grinding tool (1) in accordance with claim 9 in which said teeth, relative to an imaginary circumferential line (17) in the circumferential area embody alternating overlapping elements (15, 16) of this circumferential line (17).

11. Grinding tool (1) in accordance with claim 9 or 10 in which said teeth have on their axial sides that face one another surfaces (18, 19 or 20, 21) that are arranged in planes that run largely erpendicular (18, 19) or inclined (20, 21) to its rotational axis (22).

12. Grinding tool (1) in accordance with claim 10 in which the shape of contacting edges of said two parts (5, 7) that are formed by said overlapping on the outer circumference with respect to said imaginary circumferential line (17) is step-shaped, trapezoid-shaped, sawtooth-shaped, wave-shaped, pointed, or a combination thereof.

13. Grinding tool (1) in accordance with any of claims 1 through 12 in which said grinding wheel-type body has a grinding surface on at least one of its outer lateral surfaces (9, 10).

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14. Grinding tool (1) in accordance with any of claims 1 through 13 in which said grinding wheel-type body embodies a grinding wheel that comprises two circumferentially divided wheel-like halves and that on both lateral areas has grinding areas (6C, 6D) with which a desired width to be ground can be ground  
5 using a plunge-grinding process.

15. Grinding tool (1) in accordance with any of claims 1 through 14 in which its parts (5, 6) are embodied such that at each adjustable grinding width during grinding, grinding means are in contact in each area of the width of the grinding area to be ground.

10 16. Grinding tool (1) in accordance with claim 2 or 3 in which said adjusting/positioning units (11, 23) are mechanically manually actuatable.

17. Grinding tool (1) in accordance with claim 2 or 3 in which the adjusting/positioning units are automatically actuatable.

15 18. Grinding tool (1) in accordance with any of claims 1 through 17, the adjusted width of which can be read and/or adjusted using a scale (11).

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19. Grinding tool (1) in accordance with any of claims 1 through 18 in which embodied between said parts (5, 7) in each width setting are intermediate spaces (25) via which coolant (26) can be conducted to immediately in the grinding area (6).